6. Impact of the Act

6.1 Amendment with significant impact: prohibition on the caging of laying hens (clause 1 of section 1 of the draft Act).

Among the areas of impact listed in subsection 46(1) of Government of the Republic Regulation No. 180 of 22 December 2011 'Rules of good legislative practice and legislative drafting', the proposed amendments do not entail direct and significant impact on state governance, information technology and the information society, or on internal security. The impact analysis addresses the direct impact of the amendments on the following areas: social impact and impact on the economy (together *socio-economic impact*), environmental impact, impact on national defence and external relations, and impact on regional development.

6.1.1 Socio-economic impact

The prohibition on the caging of laying hens has a major social impact as well as economic impact, which, due to their interconnection, are addressed jointly as socio-economic impact for the purposes of this draft Act.

In Estonia, the vast majority of laying hens, that is, 81 % of laying hens, are kept in battery cages. In the European Union, around 40 % of chickens are kept in enriched cages and 40 % in perches, 15 % in free-range farming and around 7 % in organic farming. Among the other Member States, Ireland (48 %), France (32 %), Austria (31 %) and Germany (27 %) have the highest proportion of free-range chickens.[1] Compared to the other European Union countries, Estonia ranks among the top three in terms of the maximum capacity for keeping hens in cages, which signals the lag in our animal welfare friendly rearing methods.

Compared to the rest of the European Union, the total number of laying hens kept in a single animal holding in Estonia is smaller, which could suggest a reduced level of animal welfare concerns. However, this assumption has not proved to be true for all producers; national regulations (including this draft Act) and national monitoring must ensure better compliance of the food produced with food safety, quality and animal welfare standards. Compliance with these standards reduces the risk of food contamination and other potential problems in the area of food safety, and allows for proper consideration of the growing public awareness and expectations regarding enhanced animal welfare.

Today, public awareness of the quality, safety and ethical aspects of food production is also higher than ever. In the European Union, almost 77% of consumers believe that further changes to enhance animal welfare are necessary (2007). A majority of respondents to a Eurobarometer survey (2005, more than 24,000 responses from 15 EU Member States) expressed the view that the agricultural policy of their country paid too little attention to animal welfare and that laying hens were considered to be in a disadvantaged state in comparison with keeping cows and pigs.

When investigating consumer behaviour, much emphasis has been placed on the investigation of attitudes, since it is one of the factors that allows for anticipating consumer behaviour to an

[1] https://agriculture.ec.europa.eu/farming/animal-products/eggs_en#marketmonitoring

extent and, by doing so, for shaping or changing a product or marketing activity. A wide range of different background characteristics (consumer's own attributes and nature, occupation and type of work, economic situation, lifestyle) may indirectly influence a person's behaviour. There is no clear definition of consumer preference and it is difficult to form and measure. In a number of studies, consumers have found that they were not sufficiently informed about the different ways in which hens were kept and that consumers had a very low level of knowledge of the different methods of keeping hens. However, most consumers are of the opinion that the quality of the product is directly dependent on animal welfare. Since the lack of attention to animal welfare often also reduces productivity, product quality and profitability, there are a number of ethical, economic and food safety reasons for paying attention to animal welfare.

The way in which chickens are kept has been a topical issue, both in Estonia and abroad. Tallegg's chicks have created a stir in Estonia, as well as the action of animal defenders, in the course of which the retail chain Rimi was pressured to discontinue selling eggs from caged hens (2017, 2018). Abandoning the use of cage eggs has also been reported at a global level by large companies such as Nestlé, Unilever, Sodexo, General Mills and Kellogg Company (K. Kaalma, 2018[2]). The largest egg producer in Latvia and northern Europe, AS Balticovo, has entered the Estonian market. AS Balticovo produces more than 700 million eggs annually with almost 3 million hens, employs 330 persons, has an annual turnover of EUR 102 million and exports 70 % of its production. In 2027, they plan to stop keeping chickens in cages.[3] One of the largest egg producers in Lithuania, Groward Group, has set the same goal of moving towards cage-free egg production in the coming years, as have several egg producers in Poland. This trend means that a large quantity of eggs from free-range chickens is entering the Estonian market. The problem with Estonian egg production is the shortage of local producers who could ensure the provision of a sufficient quantity of free-range chicken eggs, which is why Estonian producers risk losing their market share in case they fail to keep up quickly. Egg producers also see international retail chains as a source of problem: they have decided to switch to the sale of cage-free eggs, yet wish to buy eggs at very low prices. In this context, it is necessary to negotiate between the parties in the supply chain to ensure a fair price for the producer.

Of political factors, the decisions taken at central level in the European Union which affect the caging of hens and the sale of their eggs in Estonia have a significant impact. The European Union has begun a review of all animal welfare legislation and has launched a petition 'End the Cage Age' as well as commissioned new scientific opinions and risk assessments from the European Food Safety Authority (EFSA). Among the European countries, enriched cages for rearing laying hens have been prohibited in Luxembourg, Austria, Germany (total ban since 2025), Denmark (total ban starting from 2035), the Czech Republic (total ban starting from 2027), Switzerland and the Belgian Walloon Region (total ban starting from 2028). Three of the largest countries importing eggs (Latvia, Lithuania, Poland) have not prohibited the caging of hens, but Germany, the EU's second largest egg producer, has already taken a decision to that effect.

In Germany, the abandoning of battery cages goes back to agreement between consumers and animal welfare organisations and politicians, resulting in the adoption of the legislation currently in force back in 2016. The whole process of banning cages started in Germany in the

[2] K. Kaalma, Tarbijate hoiakud ja eelistused erineva pidamisviisiga kanade munade suhtes (Consumer attitudes and preferences towards eggs from chickens reared by diverse methods), Tallinn 2018
[3] https://www.balticovo.lv/lv/par-mums

early 2000s already. By 1 January 2010, the use of battery cages was banned. Since 2001, the process has moved towards a ban on cages in general. The process was suspended in 2011 and 2012 but it was decided in 2016 that enriched or conventional cages can be used for laying hens until 31 December 2020. Caging systems used for so-called small group housing (floor area for laying hens 800 cm^2, litter perches and group nests) are allowed until 31 December 2025. The Act stipulates that in exceptional cases, by decision of the competent authority, improved cages may be used until 31 December 2028. [4]

In Estonia, the value of poultry production accounts for ~5 % of the output of the agricultural sector. According to data from the Farm Sustainability Data Network (FSDN), the average poultry holding in Estonia has relatively small agricultural land area, 9–10 hectares on average, of which ~80 % is rented.

Key economic indicators for the sector: as of 31 December 2022, there are a total of 44 operators in Estonia who have declared poultry farming (EMTAK code 01471) as one of their areas of activity in the commercial register and who, according to ARIB data, are engaged in rearing laying hens. Their total turnover was MEUR 21.35, total profit EUR 426,000, the number of employees in the field amounted to 118, the average number of employees being 3 per egg producer.
According to the data of 2022, the turnover of the four largest Estonian egg producers (Dava Foods AS, Linnu Talu OÜ, Eesti Muna OÜ and OÜ Sanlind) represents 88 % of the total sales revenue of the egg production sector. Eggs from caged hens are produced in Estonia in four undertakings: Dava Foods AS, Linnu Talu OÜ, Eesti Muna OÜ and OÜ Sanlind (in Dava Foods AS and Eesti Muna OÜ only caged hens are kept, while Linnu Talu OÜ and OÜ Sanlind also keep barn hens and free range hens in addition to caged hens). Linnu Talu OÜ plans to abandon keeping hens in cages by 2027.[5]

As of 21 October 2024, according to the ARIB, 1 674 sites where laying hens are kept have been notified. There are 18 sites with caged laying hens, 20 sites where laying hens are kept in aviaries, 129 sites where laying hens are kept free range, and 50 sites of organic egg production. The remaining sites have not defined their method. The largest share (1570 sites) is made up by producers that keep 1–100 laying hens, there are 58 sites keeping 101–500 laying hens, 9 sites keeping 500–1000 laying hens, 13 sites keeping 1 000–10 000 laying hens, 11 sites keeping 10 000–20 000 laying hens, 6 sites keeping 20 000–50 000 laying hens and 7 sites keeping 50 000–57 000 laying hens. Thus, the majority of laying hens in Estonia are kept in private households. The amendment mainly affects the laying hens kept at 18 sites, owned by four operators: Dava Foods Estonia AS, OÜ Linnu Talu, Osaühing Sanlind and Eesti Muna OÜ.[6]

The number of laying hens has been diminishing in Estonia. The total number of laying hens in Estonia was close to 580 000 at the end of 2024, according to Statistics Estonia. If a ban on caged hens is applied, the number of laying hens is likely to decrease, as this will necessitate a larger production area or alternatively a smaller flock of laying hens kept on the same production area. The production of eggs, which decreased by a quarter in 2019 due to outbreaks of avian diseases, has increased over four consecutive years (2020–2023), but has not yet returned to the 2014–2018 average of 203 million eggs per year. Estonian egg

[4] https://www.gesetze-im-internet.de/tierschnutztv/index.html#BJNR275800001BJNE001409119
[5] Eesti munatootmise üleminek kanade vabapidamissüsteemidele (Conversion of Estonian egg production to free-range chicken systems), 2023, University of Tartu RAKE
[6] The ARIB map application to get an overview of operators that keep laying hens: https://kls.pria.ee/kaart/

production, which in the early 2000s was sufficient to meet the needs of the entire country, has declined significantly in recent years, leading to increased reliance on imports, mainly from Latvia and Lithuania. In 2023, according to Statistics Estonia, 178.6 million eggs were produced, which is a 6 % increase compared to the previous year. The average egg production per hen was 299 in 2023. The level of self-sufficiency in egg production in Estonia is below 60 %.

Estonian producers compete with significantly larger European Union producers. Of the laying hens kept in the EU, 0.2 % are kept in Estonia-, which shows that the Estonian egg market is very small in the EU common market and therefore cannot shape the cost price of egg production. When trading in the common market, imports of cheaper raw materials cannot be prohibited because this is contrary to the EU Treaty. It is important to inform consumers that buying domestic produce at fair prices will increase both the investment capacity of operators and the production of eggs, and ultimately self-sufficiency in eggs.

In 2023, France, Germany, Spain, Italy, Poland and the Netherlands were the largest egg producers and market drivers in Europe. High capacity countries produce more low-priced eggs for export, which could lead to oversupply of production on the markets of countries with lower self-sufficiency as well as decrease prices and, in the long run, even lead to producers exiting the market. According to Statistics Estonia, ~90 % of eggs imported to Estonia originate from Latvia and Lithuania and 7 % from Poland. Nearly one-third of the exports of Estonian eggs go to Latvia and Germany, one-fifth to Lithuania and Norway. In recent years, the quantities of both imported and exported eggs have increased, while the increase has been much bigger in imports. According to the Estonian Institute of Economic Research, in 2024, 12 % of hen eggs were bought directly from local producers. In addition to eggs for human consumption, large volumes of egg products (egg powder, various egg masses) are imported for use in the food industry.

The price of eggs has a significant impact on the purchase decision. There has been a rapid increase in food prices in Estonia and consumers are very price sensitive. According to the Estonian Institute of Economic Research, the price of food has been highlighted as a key factor in the purchase decision by 7 percentage points of more respondents (71 % in 2024; 64 % in 2022) and special offers by 5 % more respondents (70 % in 2024; 65 % in 2022).

The retail chains sell eggs from caged hens, barn hens and free-range or organic hens, the selling price of which varies. The Estonian consumer buys the most affordable egg (egg from a caged hen, for 18 cents). Eggs from barn and free-range hens are more expensive (21 cents and 28 cents, respectively). All these egg prices are decreasing. On the basis of retail prices, only the price of organic eggs has increased, with an average price of 42 cents in 2024, compared to 38 cents in 2023. According to the Estonian Institute of Economic Research, the retail prices of both conventional and organic eggs in Estonia are ~20 % higher than the prices of imported eggs. Based on the calculations by RAKE, the average price increase for egg boxes (10 pieces) could be estimated at EUR 0.6 per box after caging is abandoned.

In Estonia, there has been little in-depth research into the interrelationship between consumer preferences and animal welfare. A study was carried out in the United States of America over a period of four years (2015)[7] to investigate the potential impact of the rearing method of laying hens on food safety, the environment, the health and well-being of chickens, the health and safety of workers and the affordability of eggs for the consumer. Each method was found

[7] https://www2.sustainableeggcoalition.org/final-results

to have its own advantages and disadvantages. With the space intended for hens expanded, the overall well-being of the hens improved because they had more opportunities for different types of natural behaviour such as perching, nesting, flying or bathing in dust. Although hens had health problems in all types of housing, the negative aspect was that the mortality of hens in free-range housing was twice as high, while free-range housing was significantly more expensive and labour-intensive, and compared to caging, the costs increased by 30–40 %. According to the results of another study carried out in the United States (2015)[8], for more than one-third of the responding consumers, the price of eggs was the most important selection criterion, and that is why it is important for the producer to keep the costs low. At the same time, more than one-half of the respondents agreed that caging of hens reduced the welfare of chickens and more than 85 % of respondents agreed to pay for additional welfare factors such as cage-free housing and the opportunity to stay outside.[9]

In the framework of the Master's thesis Tarbijate hoiakud ja eelistused erineva pidamisviisiga kanade munade suhtes (Consumer attitudes and preferences towards eggs produced by different rearing methods) published in 2018[10], a survey among the Estonian population (393 respondents) was carried out and as regards eggs, the preferred method of rearing proved to be free range, selected by 41 % of the respondents. 26 % of respondents had no preference, 18 % preferred to buy organic eggs, 8 % preferred to buy barn eggs and 1 % preferred to buy caged eggs. In choosing chicken eggs, 42 % of respondents considered the overall welfare of the chickens and the method of rearing as the most important aspects. 23 % rated the price of eggs as the decisive aspect. Almost half of respondents are willing to pay a higher price for chicken eggs produced with the well-being of chickens in mind, while 27 % of respondents would be willing to purchase more expensive eggs to ensure the well-being of chickens. 35 % of respondents stated that they preferred companies or retail chains that had decided to abandon caged eggs and sold or used only free range or barn eggs in their products. The majority of respondents considered that it was necessary to abandon the sale of caged eggs, 49 % of respondents completely agreed with the statement and 16 % rather agreed.

According to the survey of the Estonian Institute of Economic Research Toidukauba ostuotsuse mõjutegurid 2004–2024 (Determinants of the purchase decision for food products 2004–2024[11] (1 225 respondents), 20 % of respondents attached great importance to the conditions of animal welfare, with taste, freshness, quality, favourable price highlighted as the most important factors influencing the purchase decision, whereas organic, local and small-scale food products play a minor role in the purchase decision. Approximately 79 % of respondents consumed domestic chicken eggs and 5 % imported eggs, while not all consumers pay attention to the actual origin of the product on the packaging. 51 % of respondents would not be willing to pay a higher price for a domestic food product compared to an imported food product, 28 % would agree to a higher price, and 21 % could not tell (51 %, 27 % and 22 %, respectively, in 2022). Thus, over a quarter of respondents would be willing to pay a higher price for domestic food products, provided that the product improves as a result, the trend running highest among young people aged 18–29. In view of health trends and animal welfare awareness, the willingness to pay a higher price can be expected to grow in the future. In a study conducted in 2024, 34 % of respondents expressed willingness to pay a higher price for a product with an animal welfare label or animal welfare and health information, with 26 % of the respondents willing to pay up to 10 % more, 5 % up to 11–

[8] https://krex.k-state.edu/server/api/core/bitstreams/100b0d39-bea4-40e1-b9b9-00a81ee6e63c/content
[9] https://digikogu.taltech.ee/en/Download/3d031090-cf6e-429b-9563-a1b6fac177c1
[10] https://digikogu.taltech.ee/en/Download/3d031090-cf6e-429b-9563-a1b6fac177c1
[11] https://www.agri.ee/sites/default/files/documents/2025-01/uuring-2024-ostueelistused.pdf

20 % more, 2 % up to 21–50% more and 1% of respondents 51 % more or twice as much. The highest level of willingness was seen in respondents with a net monthly income of over EUR 2 000 (per family member).

It is important to keep consumers informed, as without this, the decision to purchase is made primarily on the basis of the price of the product. The market is increasingly moving towards more responsible trade, with awareness rising among both consumers and operators, while the sale of barn and free-range eggs is also increasing.

Investment need and costs

Estimates of investment needs vary widely from country to country, depending on the available infrastructure, market conditions, levels of construction prices and other factors. It is difficult to predict the exact volume of investments needed in Estonia. The largest egg producer in Latvia, AS Balticovo, plans to invest EUR 30 million in the transition to free-range farming by 2027. Investments in the Estonian egg production sector have increased in recent years according to the FSDN database; however, a limited sample does not give a complete picture.

Interviews were carried out with egg producers to assess the transition from keeping of caged hens to keeping of barn hens. The impacts are calculated on the basis of the average indicators for the type of poultry farming (more egg-focused by the production profile) in the FSDN database. In order to transfer from rearing in enriched cages to rearing hens in perches, producers can either refurbish old poultry houses or build new ones. Operators estimate that new equipment for 50 000 chickens in an existing holding will cost EUR 700 000, plus other investments such as the feeding system and heating and ventilation equipment. Setting up a new holding will cost between EUR 50–55 per hen, i.e. setting up a hen house for 50 000 chicken will cost EUR 55 per hen and EUR 2.7 million as a total investment. Estonia's largest egg producer has ~300,000 birds, so the investment needed would be MEUR ~17 million. Operators estimate that ~30 % fewer hens can be kept in perches than in cages, which would increase fixed costs by 10–15%. Production profitability calculations indicate (assuming that production will decrease as the number of hens decreases) that the unit price of the resulting output will be 10 % higher, thereby allowing for compensation for the increased costs.

As of 2023, the total number of caged hens was over 500,000 in Estonia, so the total investment would be approximately MEUR 25–30, to be adjusted according to changes in the construction price index.

An important factor influencing the transition to alternative rearing methods is the conditions for rearing laying hens, both in perches and free range. In the case of alternative rearing methods, approximately half as many chickens can be kept on the same surface area, which means that in order to maintain egg production volumes, egg producers need to expand the production area. This, in turn, may require the purchase of more land and the construction of new hen houses. One of the economic factors is therefore the price of plots in Estonia and the availability of suitable plots.[12]

The share of paid labour in poultry farming is high at ~85 % (FSDN average ~60 %) and the wages paid to employees in poultry farming are comparable to the average of the fields of

[12] Eesti munatootmise üleminek kanade vabapidamissüsteemidele (Conversion of Estonian egg production to free-range chicken systems), 2023, University of Tartu RAKE

activity of FSDN. However, companies in the sector employ on average three employees, with workforce totalling 118 as of 2022. The expansion of workforce and specialisation may, from the point of view of the operator, be necessary to ensure the welfare of the animals and the efficiency of production processes. Workers must be trained on the new systems, processes and health risks associated with free range and organic farming. The working environment can be dusty, affecting human health – it is not possible to stay in poultry houses for as long as it was possible in the case of cages, finding dead birds and collecting eggs in free range is labour-intensive.

In poultry farming, as in other types of agricultural production, total production costs are influenced by the general market situation, labour costs, feed prices, disease outbreaks and medical costs, changes in national excise duties (electricity, fuel, land tax), retail chain pricing policies, subsidies and a number of other indirect costs. Several of these (development of feed price, potential outbreaks of disease, etc.) are unpredictable and can, in a particular year, serve as a major financial burden on producers and may prove bigger sources of expenditure than the investments foreseen to change the type of production. By setting a clear end-date for the transition, operators will be able to plan and reduce the financial burden by staggering the investments. In the transition to free-range chicken farming, state support may be necessary for the construction and furnishing of new buildings and training the staff.

The amendment to be made also has an indirect impact on other operators and on the prices of their products, insofar as hen eggs serve as input for their production. The amendment may encourage the purchase of cheaper foreign eggs. Eggs are used to a lesser extent by both food and other processing industries (e.g. pharmaceuticals, cosmetics, chemicals, etc.) in their products. Local consumers and industry buy cheaper food and raw materials, as is the case for other food products, since the overall high price level of food products (including VAT) and the purchasing power of the population have a major impact. Operators are looking for ways to optimise costs, and raw material is one option to do so, but other production costs often have a greater impact on the final price of a product. Overall, the increase in disposable income and use of savings have helped maintain consumers' purchasing power.
Looking at the structure of expenditure for production in agriculture, animal feed (~35 %), fertilisers (~10 %), energy (~10 %) and agricultural services, other goods and services (~a third) account for the largest share on average. The cost of animal feed decreased by 6 % on average in 2023, mainly due to the fall in the price of feed grains.[13] In agricultural holdings, energy costs accounted for ~7 % of the total costs in 2022 (including 28 % electricity, 67 % fuel, 5 % other fuels), the energy price has undergone significant increases in Estonia in recent years. An important source of expenditure is gas used in agriculture at 1.5 %, in the food and beverage industry at 7.6 %; LPG, respectively, at 5.3 % and 6.9 % of the total volume used. The economic downturn together with rising unemployment reduces the demand for various goods and services both in Estonia and in other countries. Thus, on the basis of the breakdown of costs and consumer behaviour, it can be argued that the major factor affecting the price of eggs is not the investment in rearing methods.

Given the public interest and consumer demand for eggs produced by alternative methods of rearing, operators that have responded to changes in demand may on the contrary strengthen their competitive position. The investments necessary to restructure production can be staggered over the transition period, reducing the financial burden on operators compared to the situation where operators are forced to make investments to implement EU law within a

[13] Põllumajanduse, kalanduse, maaelu ja toiduainetööstuse ülevaade (Overview of Agriculture, Fisheries, Rural Affairs and Food Industry) 2023, Ministry of Regional Affairs and Agriculture

shorter period. The state must be prepared to intervene to support investments in egg production during the transition period and the improvement of the self-sufficiency in local eggs. The investment capacity of undertakings can be improved with the support of the Rural Development Foundation (MES).

The length of the transition period depends on a number of variables, such as the number of laying hens in one holding, the investments already made, etc., and the potential need for its extension must be analysed before the end of the transition period.

Under the measures of the Common Agricultural Policy for 2023–2027 (hereinafter *CAP*), poultry farmers shall be able eligible for the following subsidies: in May 2025, the intervention 'Investment aid for farmers to achieve the environmental and climate objectives for the period 2023–2027' will open with the aim of promoting resource efficiency in agricultural production, reducing the environmental impact of agricultural production and the generation of waste and emissions, and enhancing animal welfare and biosafety by supporting activities that contribute to at least one of the following priorities:
1) mitigation of climate change and adaptation; 2) improvement of water and air quality; 3) protection of biodiversity and soils; 4) improvement of animal welfare; 5) improvement of biosafety coupled with improvement of animal welfare.
The aid can be sought by an operator as defined in the Commercial Code, who is a farmer and whose self-generated agricultural sales revenue amounts to at least EUR 10 000 in the financial year immediately preceding submission of the application, but no upper limit has been set for sales revenue.
The maximum amount of aid for the whole period of the Strategic Plan shall be MEUR 1 and, in the case of the construction of an animal house, MEUR 1.5 per applicant. Aid is granted for up to 50 % of the eligible cost of the subsidised activity, and for the construction of animal houses up to 60 % of the cost of the eligible cost of the activity. The construction of new animal houses and the reconstruction or extension of existing ones, in accordance with the Building Code, are examples of supported activities. Also supported are, for example, the purchase of air-conditioning systems for animal houses (fans, construction of cooling ventilation systems) and, for example, the purchase of equipment for washing and disinfection of the premises of animal houses, trucks and trailers, the construction of a entrance hall for entering the territory surrounding the animal house (stationary desomats, gate systems for people, trucks, etc.), the construction of an area for storing carcasses outside the animal house before deactivation (acquisition of a container for animal waste, asphalting, concreting or otherwise making the container stand leak-proof, fencing the area). The assessment criteria and budget set out in the intervention are divided into five fields of activity, with pig and poultry farming constituting a separate field of activity.
In autumn 2025, Intervention 2.5 'Development of small farms' will open with the aim of increasing the competitiveness of small farms through supported activities, including equipment modernisation, in order to contribute to the maintenance of a diversified farm structure, including the establishment of an agricultural activity. An applicant for support may be an operator as defined in the Commercial Code engaged in the production of agricultural products whose sales revenue from self-produced agricultural products in the financial year immediately preceding the submission of the application ranged from EUR 10,000 to EUR 250,000. The maximum amount of the aid per applicant shall be EUR 100,000 during the Strategic Plan period. Aid shall be granted up to 85 % of the eligible cost of the supported activity.

Interventions for the next CAP period, 2027–2031, are currently being developed and discussed with the sector.

6.1.2 Environmental impact

Local egg production supports the country's economy by creating jobs in the agricultural sector and related industries and reducing the carbon footprint of transport.

As a result of the ban on the caging of laying hens from 2035 onwards, the construction of new aviaries could have a significant environmental impact. The environmental impact of egg production depends on the breeding of chickens (including age and weight at the start of laying), feed conversion, the microclimate of buildings, manure management, the water consumption of the production cycle from feed production to the disposal of the produce. Caged chickens convert feed in the most effective way, the development of chicks is affected more by breeding than by the method of rearing. In Estonia, the internal temperature of the poultry house must be kept above 18°C, but the average air temperature in Estonia is 7°C – the environmental impact of animal houses in Estonia may depend more on ventilation and heating solutions, as our natural climate is not suitable for egg production.

When constructing a new aviary, it must be borne in mind that the density of settlement of chickens in one animal house must be smaller than before. The aviary of free-range laying hens can accommodate approximately 20 % fewer birds. This can complicate the establishment of a new house. In recent times, when operators have wished to build new aviaries, no municipality has agreed to allow them into its territory[14][15]. In the transition to cage-free housing, the stricter regulatory requirements, including for animal welfare, environmental protection and food safety standards, must be complied with. One factor that affects egg production is temperature. It is necessary to invest in a ventilation system that cools or heats (as required) the premises where animals are kept. It is necessary to maintain an optimal temperature in the animal house so that egg production does not decrease. Thus, the amount of ammonia emitted (and dust), noise from ventilation installations and the risk associated with manure storage can have a significant impact on the environment. [16]In Estonia, it is not possible to keep chickens in such a way that egg production complies with the requirements for the production of 'free-range eggs' in accordance with Commission Delegated Regulation (EU) 2023/2465. In order for eggs to be labelled as 'free-range eggs', the birds must not stay indoors for more than 16 weeks. It would therefore be necessary to create areas where the birds can move. 50 000 laying hens would require an area of approximately 20 hectares. Such large areas would have a significant impact on the environment. Negative environmental impacts can be mitigated by introducing various environmental control strategies.

The transition from enriched cages to alternative rearing methods (barn hens, free range hens or organic hens) will allow hens to better meet their natural needs (e.g. pecking of the soil, taking sand baths, increased freedom of movement, stretching of wings), but may increase the risks of certain diseases and negative behaviours. These risks can be minimised by introducing supportive animal husbandry practices. Compared to laying hens kept in enriched cages, laying hens kept by alternative rearing methods have a lower risk of developing

[14] https://www.pollumajandus.ee/uudised/2018/11/30/vaimela-suurkanala-projekt-variseb-pormu
[15] https://maaleht.delfi.ee/artikkel/87784841/arendaja-loobus-vaimelasse-suurkanala-rajamisest-eestisse-pole-ju-voimalik-midagi-suurt-ehitada
[16] https://eur-lex.europa.eu/eli/reg_del/2023/2465/oj

Salmonella bacteria (causing salmonellosis). The transition to alternative husbandry methods also allows for reducing the intensity of animal husbandry[17].

6.1.3 Impact on national protection and external relations

From the point of view of national defence, it is extremely important to ensure food security. In the present situation, the level of self-sufficiency in eggs in Estonia is quite low (below 60 %). Self-sufficiency is one of the pillars of food supply. Egg production is a highly concentrated activity where the four largest Estonian producers account for ~90 % of production. The value of poultry production accounts for ~5 % of the output of the agricultural sector. According to Statistics Estonia, 159.3 million eggs were produced in Estonia in 2020, which is 3 % more than in 2019, but a total of 313.6 million eggs were consumed. In 2023, 178.6 million eggs were produced, but consumption continued to remain higher than production. The proposed amendment may put the self-sufficiency in eggs in Estonia at greater risk, but it may also happen in the already changed market situation, where many European Union Member States have either already banned or are banning the caging of hens, as well as large egg-producing and food-processing establishments and retail chains. This signals Estonian egg producers clearly that the transition to free-range rearing of hens is necessary, and the transition period granted by the state will allow operators to better manage their investments. The state is also willing to contribute additionally to supporting the investments of operators and to extend the transition period if this proves necessary.

In the EU, all animal welfare legislation is reviewed. In addition, a petition entitled ‘End the Cage Age’ has been launched[18] and new scientific opinions and risk assessments have been commissioned from EFSA.

6.1.4 Impact on regional development, including urban, rural and coastal areas

The impact on regional development can be considered relevant in the context of the ‘Impact Assessment Checklist Chapter 9’, as the implementation of the amendments will have a different impact in urban and rural areas.

In Estonia, egg production is concentrated in the hands of four major operators, which account for approximately 90 % of the turnover in the sector. These production facilities are mainly located in southern Estonia. Finding labour force in rural areas is quite difficult, although the wage level in this production sector is higher than in the rest of the agricultural sector. A ban on keeping laying hens in battery cages could necessitate the employment of specially trained people for the production, which could lead to higher labour costs. Operators can introduce foreign labour to find the workforce they need, but this does not provide lasting security for the producer and can have an impact on the quality of production and the welfare of the birds.

[17] Eesti munatootmise üleminek kanade vabapidamissüsteemidele (Conversion of Estonian egg production to free-range chicken systems), 2023, University of Tartu RAKE

[18] https://food.ec.europa.eu/animals/animal-welfare/eci/eci-end-cage-age_en